EPSON® EPL-N2000

Laser Printer

Network Administrator's Guide

Printed on recycled paper with at least 10% post-consumer content

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Reorient or relocate the receiving antenna

Increase the separation between the equipment and receiver

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected

Consult an experienced radio/TV technician for help.

WARNING

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Introduction

The EPL-N2000 provides the network administrator with both greater freedom and greater flexibility in allocating network resources. Because the EPL-N2000 is equipped with an Ethernet® interface card that connects directly to the network's physical layer, users can configure and control print jobs directly from their workstations rather than going through a print server. The network administrator can monitor printer status and change printer settings from the EPSON Status Monitor, which operates on a Microsoft® Windows 95® or Windows NT® 3.5x system.

Because the EPL-N2000 supports multiple protocols and automatically detects the protocols on your network, you can easily connect it to your existing network. The table below lists the different ways in which the client workstation can be connected to the printer.

Client	How Client Is Connected	Network Protocol
Windows 3.1.x, Windows 95, Windows NT 3.5x, DOS, Windows for Workgroups® 3.11	NetWare® 2.x, 3.x and 4.x Bindery Emulation Mode (Remote Print Service or Remote Printer)	IPX/SPX
Windows 95, Windows NT 3.5x, Windows for Workgroups 3.11	Windows NT 3.5x print server	NetBIOS over NetBEUI, NetBIOS over TCP/IP, DLC
Macintosh® 7.x	AppleTalk® network	AppleTalk Phase I, Phase II
OS/2®	OS/2 Warp® and Warp Connect®	NetBIOS over NetBEUI NetBIOS over TCP/IP
UNIX	Ethernet	TCP/IP

In addition, the EPL-N2000 supports IEEE 802.2, IEEE 802.3, and Ethernet II network protocols.

Although you configure the networking software for the EPL-N2000 in a particular environment (for example, on a workstation running Windows NT), any workstation on the network using the same network protocol can connect to the printer.

Note:
Of course, any Windows workstation equipped with EPL-N2000 printer driver software can connect directly to the printer via a parallel port connection, whether or not the printer is on a network. See the EPL-N2000 User's Guide *for information about installing and configuring the Windows printer driver software.*

Network Utility Software

The EPL-N2000 network utility software consists of the following programs:

- ❏ EPSON Net! for NetWare DOS and EPSON Net! for Windows are easy-to-use, menu-driven utility programs that run in DOS and Windows, respectively. Use either to configure the EPL-N2000 for NetWare.

- ❏ EPSON Net! for Macintosh is an easy-to-use, menu-driven utility program that runs in System 7.x. Use it to configure the EPL-N2000 for AppleTalk.

- ❏ EPSON Net! for Windows NT is an easy-to-use, menu-driven program that runs in Windows NT 3.5x. You can use EPSON Net! for Windows NT to configure the EPL-N2000 for TCP/IP.

Note:
You do not need special network utility software to connect the EPL-N2000 to a Windows NT server running DLC.

- ❑ EPSON Net! for OS/2 is a character-based utility for configuring the EPL-N2000 as a remote printer on an OS/2 LANServer® or LANManager® workstation.

- ❑ The EPSON Status Monitor shows printer status and allows the administrator to change certain print settings, such as print density. It runs on Windows 95 or Windows NT 3.5x.

How This Manual Is Organized

This manual describes how to connect the EPL-N2000 to the network and configure it in each of the supported network environments.

Chapter 1, "Getting Started," explains how to connect the printer to the network. It also explains how to read the indicator lights on the Ethernet interface card and use the card to print a status sheet.

Chapter 2, "Configuring the EPL-N2000 for NetWare," describes how to use EPSON Net! for NetWare DOS or EPSON Net! for NetWare Windows to configure the EPL-N2000 for use as a print server or remote printer running under Novell NetWare.

Chapter 3, "Configuring the EPL-N2000 for AppleTalk," describes how to use EPSON Net! for Macintosh to configure the EPL-N2000 for use on an AppleTalk network.

Chapter 4, "Configuring the EPL-N2000 for Windows NT," describes how to use EPSON Net! for Windows NT to configure the EPL-N2000 for use on a Windows NT server running TCP/IP. It also explains how to connect the printer directly to a Windows NT server running DLC transport protocol.

Chapter 5, "Configuring the EPL-N2000 for UNIX," describes how to to use standard UNIX commands such as arp and ping to set up and use the printer on a network running TCP/IP. No special network utility is needed.

Chapter 6, "Configuring the EPL-N2000 for OS/2," describes how to use EPSON Net! for OS/2 to send print files to the EPL-N2000 through either redirection or piping.

Chapter 7, "Using the EPSON Status Monitor," describes how to install the Status Monitor utility and use it to check printer status, change printer settings, or work with printer configuration files.

Terms and Concepts

A *node address* is a set of numbers that gives a unique identity to any piece of equipment connected to a network.

The *file server* stores data required for the EPL-N2000 to operate as a print server.

A *print queue* is an area where a print job is stored as a file before the print server sends the job to the assigned printer.

A *print server* moves jobs from print queues to printers.

A *remote printer* is a shared printer connected elsewhere on the network, but under the control of a NetWare print server. Traditionally, a remote printer is connected to a network workstation running NetWare's RPRINTER, but the EPL-N2000 can also function as a remote printer.

A *status sheet* prints each time the Status Sheet button on the Ethernet interface card is pushed. If the EPL-N2000 is configured as a print server, the status sheet lists the configurations of the printer on each network.

A *print spooler* is an application that places print jobs or requests in a queue.

TCP/IP (Transmission Control Protocol/Internet Protocol) is a suite of protocols that performs a subset of overall networking communication tasks.

ftp is a UNIX command for file transfer on a TCP/IP network.

lpr is a UNIX command for remote printing on a TCP/IP network.

Resetting the EPL-N2000 causes it to initialize. You can reset the printer in the following ways:

- ❏ Switching the printer off and back on again
- ❏ Pressing the reset key combination (Alt–Continue) on the printer's control panel

A *zone* is a group of users, computers, and devices on an AppleTalk network. Zones can be grouped according to physical location, work groups, or departments.

Chapter 1

Getting Started

1

Connecting the Ethernet Interface Card to the Network 1-2

Reading the Indicator Lights 1-5

Resetting the Ethernet Card 1-6

This chapter explains how to connect the Ethernet interface card to the network, as well as how to perform such basic tasks as reading the card's lights, using the card to print a status sheet, and resetting the card.

Connecting the Ethernet Interface Card to the Network

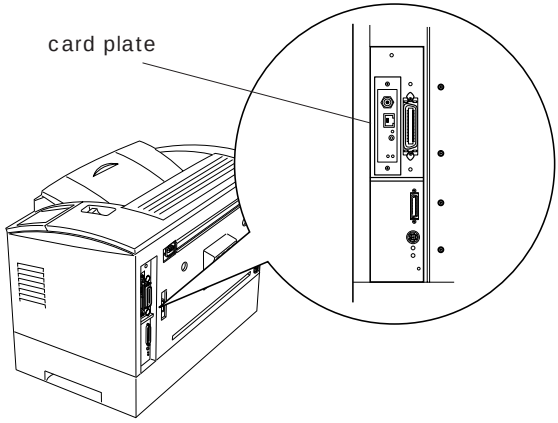
Your EPL-N2000 comes with a preinstalled Ethernet interface card that you can connect to your network using either a 10BASE-T or 10BASE2 network cable. (Your printer includes a coaxial Y-connector for a 10BASE2 connection.)

Follow these steps to connect the card to your network:

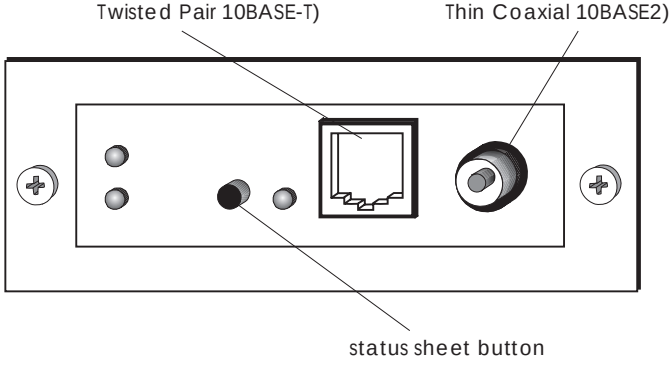
1. Make sure the Interface setting in the SelecType Setup Menu is set to Auto, then turn off the printer.

   Note:
   This setting ensures that the card automatically switches mode to match the network interface used. See Chapter 3 in the User's Guide *for information on SelecType settings.*

2. Locate the Ethernet card plate on the back of the printer.



3. Attach the network cable to the appropriate connector.



Note:
You can attach the Ethernet interface card to only one connector at a time.

4. Turn on the printer while pressing the status sheet button for about three seconds. The Ethernet interface card initializes.

5. Press the status sheet button a second time after the card completes initialization. A status sheet prints.

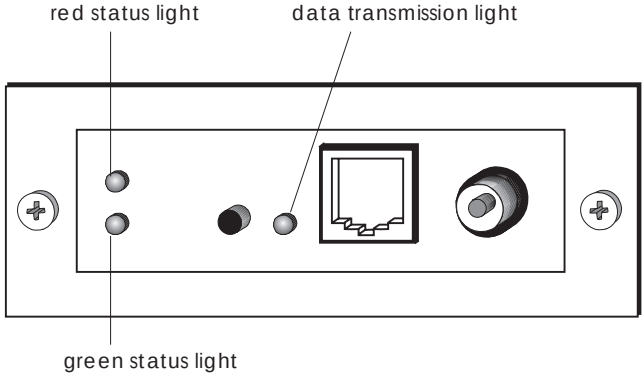
The status sheet provides information you need to configure your printer for the network, such as the IP address for the Ethernet interface card, and the printer's serial number and current configuration.

If the printer fails to print a status sheet, make sure that the printer is online and that no jobs are processing, then wait one minute before pressing the status sheet button again. If it still does not print a status sheet, turn the printer off. Wait at least five seconds before turning it on, then press the status sheet button again.

Note:
If your printer has an EPSONScript Level 2 module installed, allow a minute for the printer to initialize before trying to configure it on the network. The EPL-N2000 may not configure properly if PostScript initialization has not been completed.

Reading the Indicator Lights

In addition to obtaining detailed information by printing a status sheet, you can obtain basic printer status by reading the indicator lights on the Ethernet card plate.



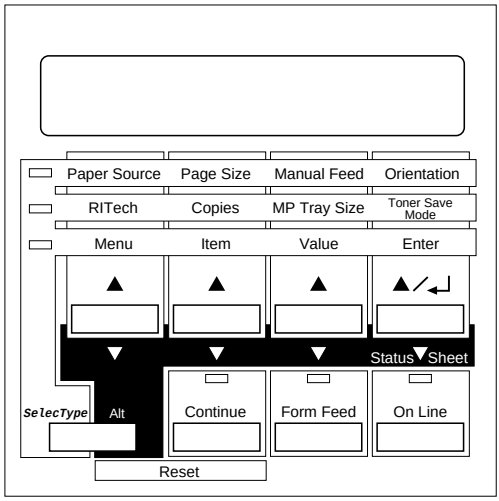
The green data transmission light blinks when the Ethernet card sends data.

The red and green status lights indicate the following conditions:

Red	Green	Status
Both lights blink simultaneously		Ethernet card is initializing
Both lights blink alternately		Ethernet card recognizes the network connection.
Off	On	Normal ready status
On	On	Error status

Resetting the Ethernet Card

When an error condition occurs, you may be able to correct it by resetting the Ethernet card. You can reset the card by switching the printer off and on again, or by pressing the Reset key sequence (Alt–Continue) on the printer control panel.



If you turn the printer on while pressing the status sheet button on the card plate, all card configuration settings are reset to the factory default settings.

Chapter 2

Configuring the EPL-N2000 for NetWare

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2

This chapter describes how to configure the EPL-N2000 as a print server or remote printer running under Novell NetWare.

The EPL-N2000 comes with EPSON Net! for NetWare, EPSON's proprietary NetWare printer management utility. You can use EPSON Net! for NetWare to add or delete queues, change port configurations, rename the print server, configure the interface to service queues on other file servers, and other tasks.

There are two versions of EPSON Net! for NetWare: EPSON Net! for NetWare Windows, and EPSON Net! for NetWare DOS.

Before you begin, do the following:

- ❏ Log on the network with supervisor privileges.
- ❏ Decide whether you want to configure the EPL-N2000 as a dedicated print server or remote printer, or whether you want to switch automatically between these two modes.
- ❏ Make sure the EPL-N2000 is connected to the network and turned on. See Chapter 1 for information on connecting the Ethernet interface card.
- ❏ Make sure that Novell NetWare is set up to use print services on the network. See your Novell NetWare documentation for details about setup.

Caution:
Once you make changes to the EPL-N2000, you must wait at least five minutes before turning off or rebooting your printer.

Installing EPSON Net! for NetWare

EPSON Net! for NetWare requires a minimum of 480KB conventional memory.

Follow these steps to install the utility:

For Windows

1. Insert the EPSON Net! for NetWare Windows diskette.
2. Choose Run from the File menu.
3. Type a:\windows\install (or b:\windows\install) and click OK.
4. Follow the instructions on the screen.

   After installation is complete, EPSON Net! for NetWare appears in the EPSON Net! group.

For DOS

1. Insert the EPSON Net! for NetWare DOS diskette.

   Note:
   Your workstation must have a high density diskette drive.

2. Use the COPY command to copy the following files to a network directory or to your hard drive:

   EPNWDE.EXE
   EPNWDE.DAT

If you are configuring the EPL-N2000 as a print server, go to the next section in this chapter. If you are configuring the EPL-N2000 as a remote printer, go to "Configuring the EPL-N2000 as a Remote Printer." If you want to configure the printer to switch automatically between these two modes, go to "Configuring the EPL-N2000 to Switch Modes" at the end of the chapter.

Configuring the EPL-N2000 as a Print Server

In Print Server mode, the EPL-N2000 performs all print server functions and can service up to 32 print queues and eight file servers. No VAP (Value-Added Process) or NLM (NetWare Loadable Module®) is required. When you send a print job from your application, the file server assigns the print job to a print queue. When the corresponding printer is ready, the EPL-N2000 sends the job to the printer.

Like any NetWare print server, the EPL-N2000 services the assigned queues in round robin fashion, and services higher priority queues before those of lower priority. For added security, the EPL-N2000 supports encrypted passwords.

Since the EPL-N2000 is set to Print Server mode by default, you don't need to make any special settings to use it as a print server. However, you do need to assign it print queues on a NetWare file server, or on multiple NetWare file servers.

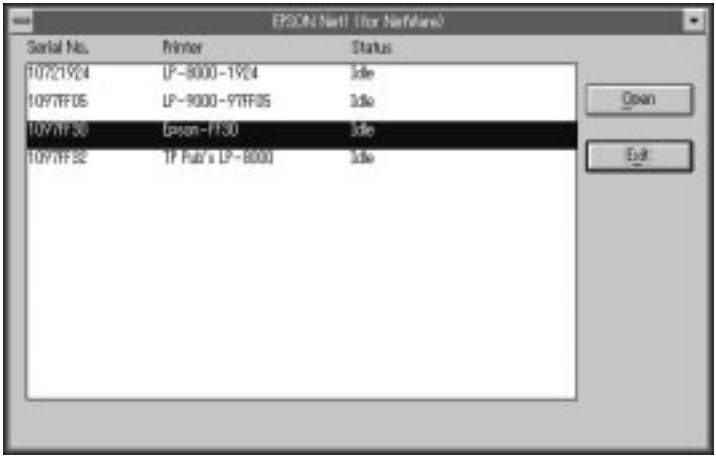
Assigning Print Queues on a Single NetWare File Server

This section explains how to assign print queues on a single NetWare file server to an EPL-N2000 configured as a print server. If you want to set up queues on multiple NetWare file servers, "Assigning Print Queues on Multiple NetWare File Servers" later in this chapter.

Follow these steps:

1. Run EPSON Net! for NetWare.

   After a few seconds, the following dialog box appears.



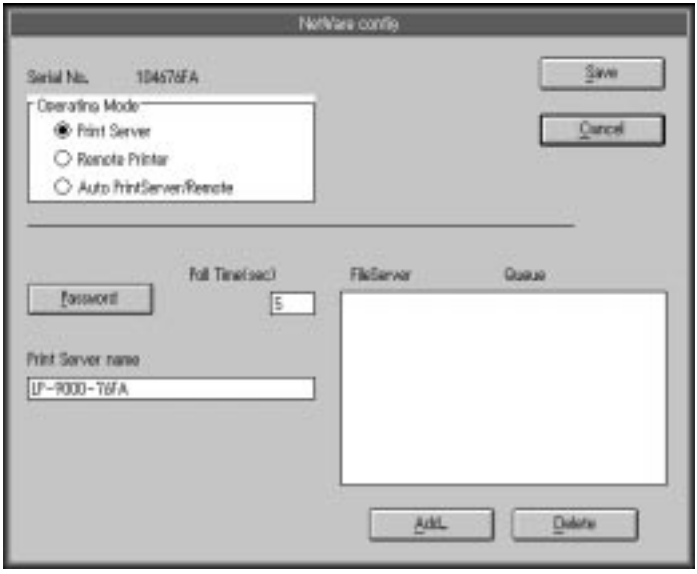
   This dialog displays printer status and identifies each printer on the network by serial number and name.

2. Highlight the printer you want to configure from the list and click Open.

The NetWare Status dialog box appears.

3. Click Edit to configure the printer.

The NetWare Config dialog box appears.

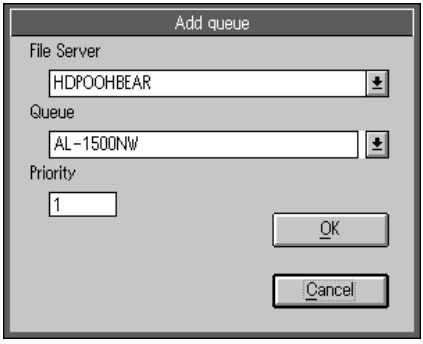


4. Make sure Print Server is selected as the operating mode. In the Print Server name box, enter a unique name up to 32 characters long.

   Note:
   It's a good idea to choose a name that's easy for other users to remember, such as a department name, or the name of the printer's owner. A period is allowed if it is not the first character. However, you cannot use a space or any of the following characters:
   / \ : ; , * | + [ ] "

5. Click Add at the bottom of the dialog box to assign a print queue to your print server.

   The Add Queue dialog box appears. The Queue drop-down list indicates which queues are available on this NetWare file server.



6. Select a print queue from the Queue list, or create a new queue by entering its name in the Queue box.

7. Select a priority level for the queue in the Priority box. You can set a level from 1 to 10, with 1 having the highest priority.

8. Click OK. The NetWare Config dialog box appears again.

9. Repeat steps 6 through 8 if you want to add additional print queues to the print server.

10. Click Save in the NetWare Config dialog box to save your settings.

Assigning Print Queues on Multiple NetWare File Servers

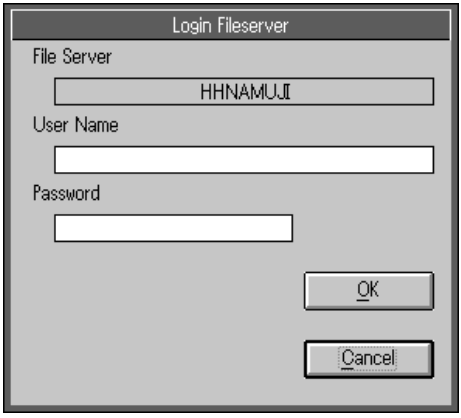
You can assign queues on multiple file servers to an EPL-N2000 configured as a print server. You must have supervisor privileges and the correct password for each file server.

Note:
If you want to assign print queues from a single NetWare file server, see the preceding section.

Follow these steps:

1. Complete steps 1 through 4 in "Assigning Print Queues on a Single NetWare File Server."

2. Select the file server you want to attach to the printer from the File Server list box.

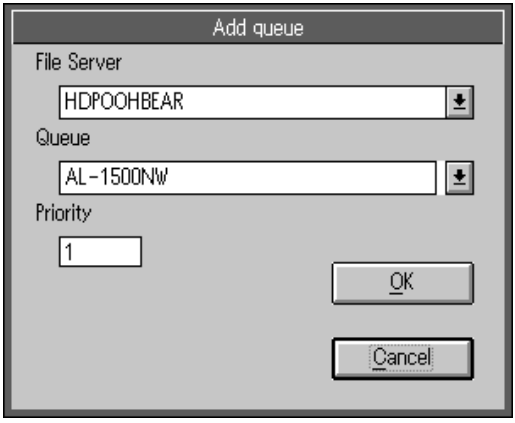


If you have not already logged on the selected file server, the Login Fileserver dialog box appears. Continue with the next step. If you are already logged on the selected file server, go to step 4.

3. Enter a username and password, then click OK. (The username must have supervisor privileges.) You return to the NetWare Config dialog box.

4. Click Add to assign a print queue from this file server to the EPL-N2000.

   The Add Queue dialog box appears. The Queue drop-down list indicates which queues are available on this NetWare file server.



5. Select a print queue from the Queue list, or create a new queue by entering its name in the Queue box.

6. Select a priority level for the queue in the Priority box. You can set a level from 1 to 10, with 1 having the highest priority. Click OK.

   The NetWare Config dialog box appears again.

7. Repeat steps 2 and 3 if you want to add additional file servers to the printer. Repeat steps 4 through 6 if you want to add additional print queues to any file server.

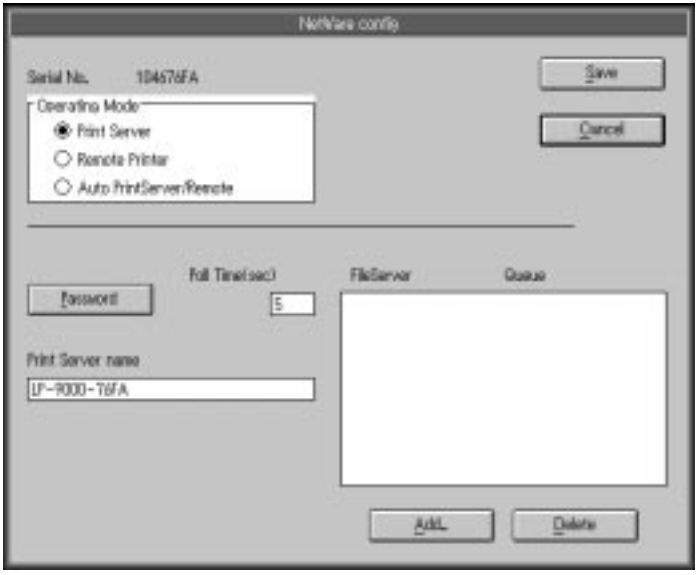
8. Click Save in the NetWare Config dialog box to save your settings and exit EPSON Net! for NetWare.

Deleting Print Queues from a Print Server

Follow these steps to delete a print queue from a print server:

1. Access the NetWare Config dialog box.

2. Highlight the queue you want to delete and click Delete.



3. At the prompt, click OK.

4. Click Save in the NetWare Config dialog box to save your settings.

Renaming the Print Server

You must set the operating mode to either Print Server or Auto PrintServer/Remote to change the print server name for the EPL-N2000.

Follow these steps:

1. Access the NetWare Config dialog box.
2. Enter the new name (up to 32 characters) in the Print Server text box.

   Note:
   It's a good idea to choose a name that's easy for other users to remember, such as a department name or the name of the printer's owner. A period (.) is allowed if it is not the first character. However, you cannot use a space or any of the following characters:
   / \ : ; , * | + [ ] "
3. Click Save.

Assigning a Password

If you've assigned print queues on a restricted file server to the EPL-N2000, you need to assign a password to allow users to connect.

Follow these steps:

1. Access the NetWare Config dialog box.
2. Click Password.

The following dialog box appears:

3. Enter the same password used for the restricted file server, then click OK.

4. Click Save in the NetWare Config dialog box to save your setting.

Setting the Queue Polling Time Interval

You can change the interval at which the printer checks queues for waiting print jobs. Although the factory default setting is 5 seconds, you can set the interval at up to 90 seconds to reduce network traffic.

Follow these steps:

1. Access the NetWare Config dialog box.

2. Enter a value from 1 to 90 in the Poll Time text box.

3. Click Save.

Configuring the EPL-N2000 as a Remote Printer

As with all NetWare remote printers, the EPL-N2000's print speed is slower in Remote Printer mode than in Print Server mode. The main advantage of Remote Printer mode is that connection to a file server is not required, making this mode desirable in installations with limited available file server connections.

Before configuring an EPL-N2000 as a remote printer, you must use PCONSOLE to define it on a NetWare print server. The print server can be either a dedicated workstation running PSERVER, or a file server.

You then use EPSON Net! for NetWare to configure the operating mode and make other configuration changes.

Defining the EPL-N2000 on a NetWare Print Server

If you use NetWare 4.x, menus will differ slightly from the menus described in the following procedure, and you must select Bindery Emulation. Press F4 to switch between Bindery Emulation and Directory Services.

Follow these steps:

1. At the DOS prompt, type PCONSOLE.
2. From the Available Options menu, select Print Server Information.
3. Select the name of a print server from the Print Servers list and press Enter.
4. From the Print Server Information list, select Print Server Configuration and press Enter.
5. Select Printer Configuration and press Enter.

6. Select a port number in the Configured Printers list and press Enter.

7. Select the name of the EPL-N2000 on the Printer Configuration menu. Then highlight the Printer Type and select LPT1.

   Note:
   Although you can define the printer port as COM 2, it is recommended that you define it as LPT1 to maintain compatibility.

8. Press Esc; then press Enter to save changes.

9. Select Queues Serviced by Printer from the Print Server Configuration menu and assign a queue to the print server port from the Available Queues list.

10. Press Esc to exit.

Configuring the Operating Mode and Making Other Changes

After you define the EPL-N2000 on a NetWare print server, you are ready to use EPSON Net! for NetWare to configure it to operate as a remote printer. You can then make the following changes:

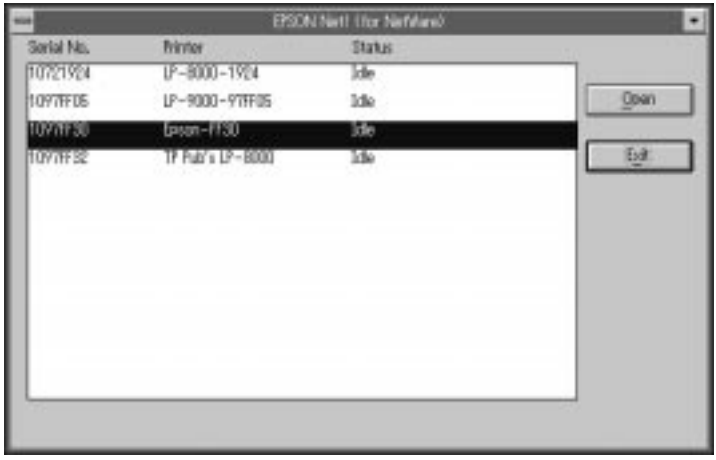
- ❏ Change the port number to allow the EPL-N2000 to connect to a different port on the NetWare print server.

- ❏ Enable or disable hunting, which allows the EPL-N2000 to connect to the first available active port on the print server. (This feature is useful if the NetWare print server has many ports.)

Follow these steps to complete configuration of your card as a remote printer and to make other optional changes:

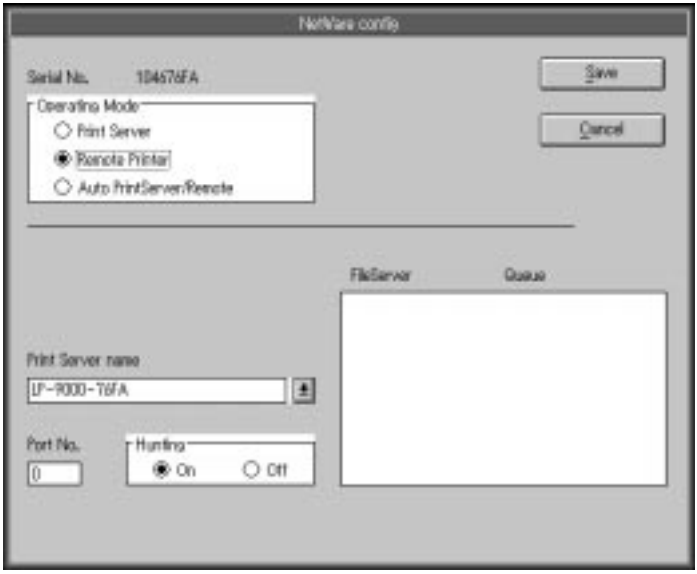
1. Run EPSON Net! for NetWare.

2. In the EPSON Net! for NetWare summary dialog box, highlight the EPL-N2000, then click Open.



3. Click Edit in the NetWare Status dialog box.

4. In the NetWare Config dialog box, make sure Remote Printer is selected as the operating mode.



5. If you don't want to make other configuration changes, go to step 8.

   To make additional changes, select the print server that services the EPL-N2000 in the Print Server name drop-down list, or enter a new name.

6. To change the port number, enter the number for any available port in the Port Number text box.

   Note:
   You can enter a setting from 0 to 15 for NetWare versions 3.x and below. For NetWare 4.x and higher, available settings are from 0 to 254.

7. To enable hunting, click the On radio button in the Hunting box. The default setting is Off.

8. Click Save to save your changes.

Configuring the EPL-N2000 to Switch Modes

You can configure the EPL-N2000 to switch automatically between print server and remote printer modes, depending on network conditions. If your NetWare print server is available, the EPL-N2000 detects its presence and operates as a remote printer. However, if the NetWare print server becomes unavailable, the EPL-N2000 provides print server backup.

Before the EPL-N2000 can operate as an alternate print server, you must give it the same name and assign it the same print queues as the NetWare print server.

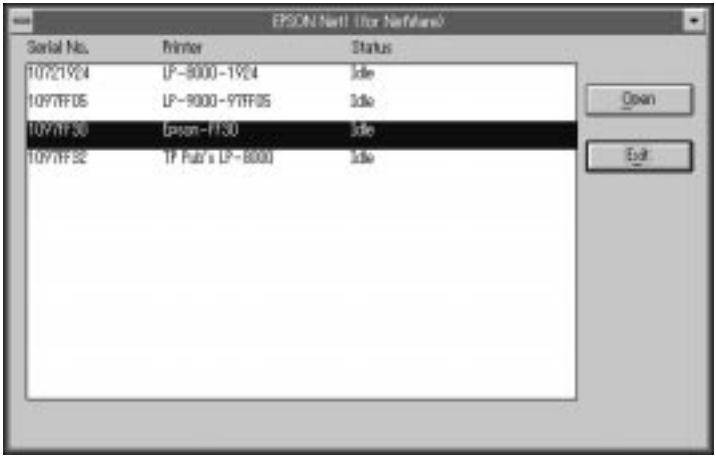
Follow these steps:

1. Make sure the NetWare print server is on.

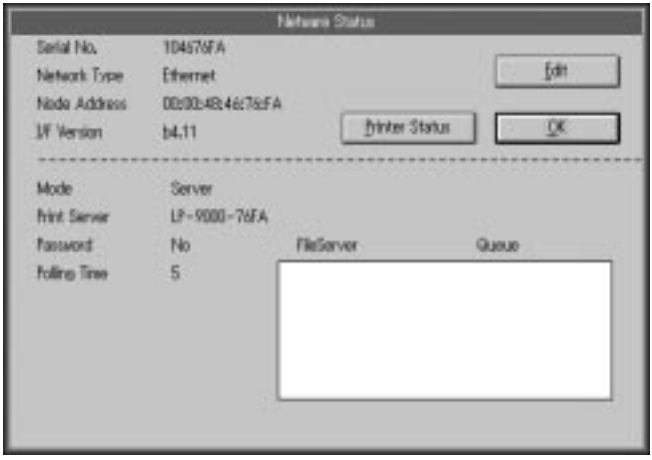
2. Log on with supervisor privileges to all file servers with print queues assigned to the NetWare print server.

3. Run EPSON Net! for NetWare.

4. In the EPSON Net! for NetWare summary dialog box, highlight the EPL-N2000, then click Open.



5. Click Edit in the NetWare Status dialog box.



6. In the NetWare Config dialog box, make sure Auto PrintServer/Remote is selected as the operating mode.

7. Assign the same print queues to the EPL-N2000 that are assigned to the NetWare print server. See "Assigning Print Queues on a Single NetWare File Server" earlier in this chapter for more information.

8. Enter the name of the NetWare print server in the Print Server name text box.

9. Make any additional configuration changes for either Print Server mode or Remote Printer mode. See the appropriate sections earlier in this chapter.

10. Click Save to save your settings.

Chapter 3

Configuring the EPL-N2000 for AppleTalk

Installing EPSON Net! for Macintosh 3-3

Using EPSON Namer to Rename Your Printer 3-3

Using EPSON Zoner to Assign a Zone to Your Printer 3-7

3

This chapter describes how to configure the EPL-N2000 from a Macintosh computer using EPSON Net! for Macintosh.

Before configuring the EPL-N2000 on an AppleTalk network, do the following:

- ❏ Install the optional EPSONScript Level 2 ROM module (C832261). (See the instructions that came with your module.)
- ❏ Install the EPSONScript driver for Macintosh. (Look for the driver diskette in the box that the EPSONScript Level 2 ROM module came in.)
- ❏ Make sure the EPL-N2000 is connected to the network. See Chapter 1 for information on connecting the Ethernet interface card.

EPSON Net! for Macintosh consists of two utilities: EPSON Zoner and EPSON Namer. To set up the EPL-N2000 for an AppleTalk network, you need to copy these two utilities to your hard disk and rename the printer using EPSON Namer. If necessary, you then assign a zone to the printer using EPSON Zoner.

Note:
EPSON Zoner works only on an AppleTalk Phase II network.

Installing EPSON Net! for Macintosh

Follow these steps:

1. Create a folder for EPSON Net! for Macintosh on your hard disk drive.

2. Insert the EPSON Net! for Macintosh diskette.

3. Double-click on the diskette icon to open it, and copy EPSON Namer and EPSON Zoner to the new folder.

Using EPSON Namer to Rename Your Printer

Because your EPL-N2000 has a default name, you need to rename it to avoid having multiple EPL-N2000 printers on the same network with the same name.

The EPSON Namer utility lets you rename printers in any zone on the network, including the local zone.

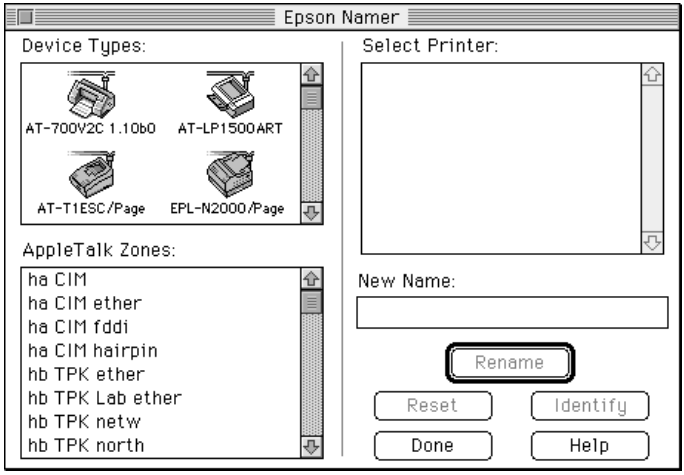
Note:
If your printer will be serviced by a print spooler, rename the printer before configuring the spooler.

Follow these steps:

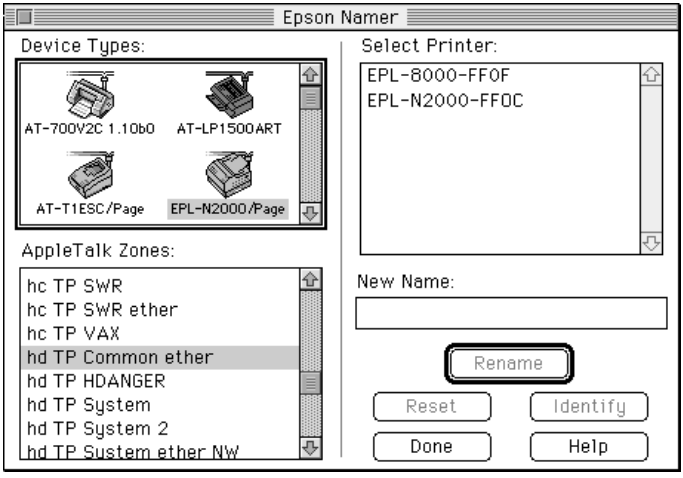
1. Make sure the EPL-N2000 is turned on. Wait at least a minute after turning on the printer to allow for PostScript initialization.

   Note:
   Your printer may not configure properly if PostScript initialization is not complete.

2. Double-click on EPSON Namer to start the utility. After EPSON Namer searches your network, the following screen appears:

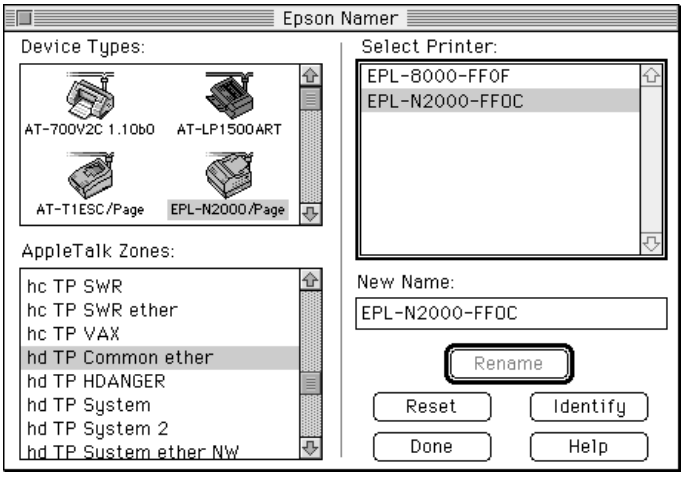


3. Select the name of the printer's installed driver from the Device Types list.



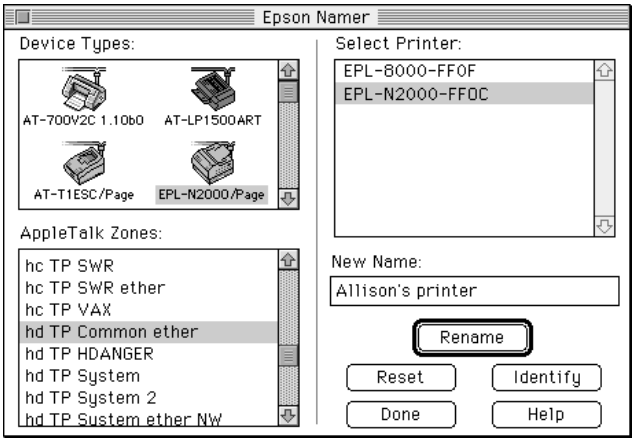
4. From the AppleTalk Zones list, select the zone that contains the EPL-N2000 that you want to rename. You may need to scroll through the list of zones to find the one that contains your printer.

5. Select the printer you want to rename from the Select Printer list. If the zone has only one EPL-N2000, that printer is selected automatically.



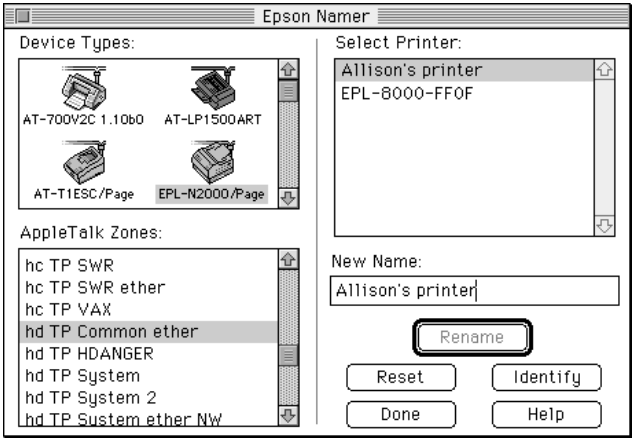
Note:
If you have more than one EPL-N2000 on the network, they all have the same name in the Select Printer list. To identify a printer, highlight the printer name and click Identify. *The selected printer prints a page providing printer name, type, and zone. Rename the printer and repeat the process for other EPL-N2000s.*

6. Enter a unique name in the New Name text box. You can choose any name up to 32 characters long.



Note:
It's a good idea to choose a name that's easy for other users to remember, such as a department name or the computer owner's name. A period is allowed if it is not the first character. However, you cannot use a space or any of the following characters:
/ \ : ; . * | + [ ] "

7. Click Rename. The new name appears in the Select Printer list.



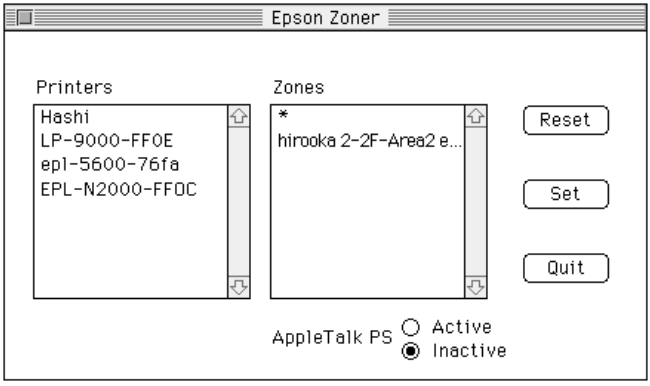
8. Click Done to exit EPSON Namer.

   If you should ever want to return the EPL-N2000 to its default name, click Reset.

Using EPSON Zoner to Assign a Zone to Your Printer

Follow these steps to assign a zone to the EPL-N2000 on an AppleTalk Phase II network:

1. Double-click on EPSON Zoner to start the utility. After searching your network, EPSON Zoner displays the following screen:



2. Select your printer name in the Printers list.

3. In the Zones list, select the zone that you want to assign to your printer.

   Note:
   The default zone appears as an asterisk (*).

4. Set the AppleTalk PS option to Inactive.

5. Click Set.

6. If you are assigning a zone to more than one EPL-N2000, repeat steps 2 through 5 for each printer.

7. Click Quit to exit.

Wait at least 30 seconds after clicking Set *before rebooting your printer.*

Your EPL-N2000 will remain in the assigned zone as long as the zone is available.

When you finish configuring your EPL-N2000, be sure to notify all network users of your printer's name and zone.

Chapter 4

Configuring the EPL-N2000 for Windows NT

Configuring on a Windows NT Server Using DLC 4-2

Configuring on a Windows NT Server Using TCP/IP 4-4
- Installing EPSON Net! for Windows NT 4-4
- Setting the IP Address 4-4
- Creating the Printer on the Windows NT Server 4-6

4

This chapter describes how to configure the EPL-N2000 for use as a remote printer on a Windows NT server running either DLC or TCP/IP.

Before configuring the EPL-N2000 for Windows NT, do the following:

- ❑ Make sure the EPL-N2000 is connected to the network and turned on. See Chapter 1 for more information.
- ❑ If you're using DLC, make sure that the DLC protocol and driver are installed. See your Windows NT documentation for details. (If you're unsure, check the list of installed network software in the Networks dialog box.)
- ❑ If you're using TCP/IP, make sure that standard TCP/IP software is installed. See your Windows NT documentation for details.

Configuring on a Windows NT Server Using DLC

You don't need any special network setup utility when you configure the EPL-N2000 on a Windows NT server using DLC.

Follow these steps:

1. Select Print Manager from the Main group.
2. Choose Create Printer from the Printer menu. The Create Printer dialog box appears.
3. Enter a name for the printer in the Printer Name field.

Note:
It's a good idea to choose a name that's easy for other users to remember, such as a department name, or the name of the printer's owner. A period is allowed if it is not the first character. However, you cannot use a space or any of the following characters:
/ \ : ; . * | + [ ] "

4. Select the printer driver from the Driver pull-down menu.

5. Select Other from the Print To pull-down menu. The Print Destination dialog box appears.

6. Select (HP Network Port) from the Available Print Destinations list. The Add an HP Network Peripheral Port dialog box appears.

   Note:
   If HP Network Port does not appear as a choice, the DLC transport protocol and driver are not installed.

7. Enter a name for the port in the Name box.

   Note:
   Make sure you don't use the name of an existing port, such as LPT1, or of any other existing DOS device.

8. Select LAN Hardware Address (Node Address) from the Card Address list. (This address matches the address listed under Node Number on the printer status sheet.)

9. Click the Timer button and select the Job Oriented option. If you want to share the printer, click the Share the Printer on the Network box.

   Note:
   The share name defaults to the printer name. You can change it if you want.

10. Click OK to exit the Add a Network Peripheral Port dialog box, then click OK again to exit the Create Printer dialog box. The main menu for the EPL-N2000 driver appears.

11. Set any printer options you want. See Chapter 2 in the *EPSON EPL-N2000 User's Guide* for more information.

Configuring on a Windows NT Server Using TCP/IP

To configure the EPL-N2000 on a Windows NT server running TCP/IP protocol, you first set the printer's IP address. Then you use EPSON Net! for Windows NT to create the printer on the server.

Installing EPSON Net! for Windows NT

Follow these steps to install EPSON Net! for Windows NT:

1. Insert the EPSON Net! for Windows NT diskette.

2. Choose Run from the File menu.

3. Type a:\install.exe (or b:\install.exe) and click OK.

   The EPSON Net! group appears in the Program Manager.

Setting the IP Address

To prevent conflict between the EPL-N2000 and another network device, you must assign a unique IP address to the printer before it can be used on the network.

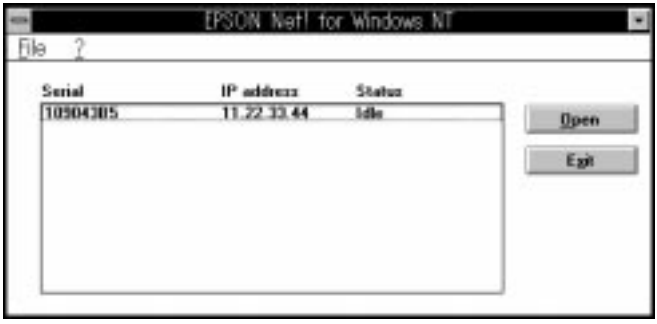
Follow these steps:

1. Press the status sheet button on the Ethernet card plate to print a network adapter status sheet for the EPL-N2000. (This sheet provides important information about the printer's node address and serial number.) See Chapter 1 for more information.

2. Find out what the IP addresses are for several devices in use on the network segment to which the printer is connected.

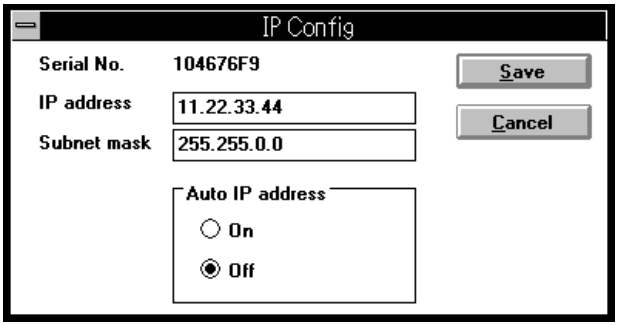
   Note:
   The address you assign to the printer must contain the first three octets common to IP addresses for all devices on that network segment, and a unique fourth octet.

3. Double-click the EPSON Net! (NT) icon to start the utility. The following dialog box appears:



4. Select the printer's serial number from the list and click Open. The IP Config dialog box appears. This dialog box shows the printer's current IP address.

5. Enter a unique IP address in the IP address box, and a subnet mask in the Subnet mask box. You can leave the Auto IP address off, although this option has no effect on Windows NT.



6. Click Save to save your settings and exit the dialog box.

It takes a few seconds to register the IP address change, so there may be a short delay before it is displayed.

Creating the Printer on the Windows NT Server

Follow these steps to create the printer on the Windows NT server:

1. Click Print Manager in the Main program group.

2. Choose Create Printer from the Printer menu. The Create Printer dialog box appears.

3. Enter a name for the EPL-N2000 in the Printer Name text box.

Note:
It's a good idea to choose a name that's easy for other users to remember, such as a department name, or the name of the printer's owner. A period is allowed if it is not the first character. However, you cannot use a space or any of the following characters:
/ \ : ; . * | + [ ] "

4. Choose the EPL-N2000 driver from the Driver pull-down menu.

5. Choose Other from the Print To pull-down menu. The Print To dialog box appears.

6. Select LPR Port from the Available Print Monitor list, then click OK. The Add LPR-compatible Printer dialog box appears.

7. In the first text box, enter the IP address for the EPL-N2000.

8. Click the Printer Name of the Computer text box and enter the name assigned in step 3. Click OK. The Create Printer dialog box appears.

9. Make sure all your settings are correct, then click OK.

You can change the printer driver settings from the Create Printer dialog box at any time.

Chapter 5

Configuring the EPL-N2000 for UNIX

5

Setting Up the EPL-N2000 as a Network Device 5-2
Setting Up the EPL-N2000 as a Remote Printer 5-4

Printing to the EPL-N2000 5-6
Using ftp to Print 5-7
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Setting Up the EPL-N2000 with Other UNIX Systems 5-9
Setting Up for SCO UNIX Systems 5-9
Setting Up for IBM AIX Systems (RS/6000) 5-12
Setting Up for HP-UX Systems 5-13

Because the EPL-N2000 supports many standard UNIX commands, you don't need a special setup utility to configure it from a host computer running UNIX.

The EPL-N2000 functions as a remote printer for systems using TCP/IP Ethernet transfer with remote printing protocol (lpr) or standard file transfer protocol (ftp).

After the printer has been set up on the network, any host computer can send a print file to it, provided the host has the device's name and IP address in its directory.

Before you configure the EPL-N2000 for UNIX, make sure the printer is connected to the network. See Chapter 1 for details.

Setting Up the EPL-N2000 as a Network Device

Follow these steps to set up the EPL-N2000 as a network device:

1. Turn on the EPL-N2000 and press the status sheet button on the Ethernet card plate to print a network adapter status sheet. (This sheet provides information about the printer's node address.) See Chapter 1 for details.

2. Determine several IP addresses in use in the network segment to which the printer is connected. (The address you assign to the printer must contain the first three octets common to IP addresses for all devices on that network segment, and a unique fourth octet.)

   Note:
   You must assign a unique IP address to the printer before it can be used on the network. Otherwise the network may not be able to distinguish between the EPL-N2000 and another device. (This is especially true if another EPL-N2000 that has not be assigned an IP address is active on the network.)

3. From the host computer, use arp to assign a unique IP address to the printer. The format is as follows:

   arp-s <IP address> <node address>

   The following example illustrates the arp command:

   arp-s 133.200.3.181 00:00:48:92:DA:35

4. Use ping to verify that you have assigned a unique address. If another device responds, repeat step 3 to assign a different address. The format is as follows:

   ping <IP address>

   The EPL-N2000 is set to this IP address.

5. Edit the /etc/hosts file on the host computer to include the new IP address and a host name. The format is as follows:

   <IP address> <host name>

   For example, you might make the following entry:

   132.147.69.4 Allison

   Note:
   Choose a name that's easy for other users to remember, as the host name is used to identify the printer when sending print files. A department name or the computer owner's name are good choices.

6. Use ping to make sure that the EPL-N2000 is responding. You can use either of the following formats:

   ping <host name>

   or

   ping <IP address>

If the card responds, you are ready to print. If not, print a status sheet and check the IP address to make sure that it corresponds to the IP address entered in the /etc/hosts file. If you used the IP address to test the connection, make sure that you entered it correctly with ping.

Setting Up the EPL-N2000 as a Remote Printer

After you set up the EPL-N2000 as a network device, you need to set it up as a remote printer. If your UNIX system has an /etc/printcap file, continue with the procedure below. If not, see "Setting Up the EPL-N2000 with Other UNIX Systems" later in this chapter.

In addition to the host name assigned when you set up the printer as a network device, you must enter a remote printer name for the EPL-N2000 and a local printer name for the printer whose output is being redirected.

Users who want to append a form feed to the end of a print file or insert carriage returns at the end of lines must include output filters when they send a print job. Before users can enter filters with the lpr command, you must set up the EPL-N2000 to recognize these filters. You do this by specifying different remote printer options when you edit the /etc/printcap file. You must specify a different remote printer name and local printer name for each remote printer option that you include—in essence, treating the EPL-N2000 as if it were more than one printer.

The remote printer options used to invoke different lpr filters areas follows:

lpr filter	Supports
lpb	Binary file (no filters)
lpa	ASCII file with carriage returns at line ends
lpbf	Binary file with form feed at file end
lpaf	ASCII file with form feed at line end

Follow these steps:

1. Edit the /etc/printcap file to include a remote printer name for the EPL-N2000. The format is as follows:

   <remote printer name>:\

   Note:
   You can use any name to identify the EPL-N2000. One advantage of using simple names that follow a sequence is that it makes it easier to assign several remote printer names to the same EPL-N2000 (for example, printer1, printer2, and printer3*). You may want to do this if you plan to set up the EPL-N2000 to recognize different lpr filters.*

2. On a new line in the /etc/printcap file, enter a name for the local printer being redirected to the EPL-N2000, followed by the host name, then the path to the EPL-N2000. If you plan to set up the printer to support different lpr filters, enter the first printer option too. The format is as follows:

   :<local printer> : rm = <host name> : rp = <remote printer option> : sd = <path>/<remote printer name>:

Note:
You can also use any name as the local printer name (for example, the default printer name lp *can be used.)*

The following example illustrates an entry with the lpb printer option:

```
printer1:\

:lp=:rm=Allison:rp=lpb:sd=/var/spool/printer1:
```

3. If you are setting up the EPL-N2000 to support different lpr filters, repeat steps 1 and 2 for each remote printer option that you want to add. Make sure to enter a new remote printer name and local printer name for every option.

Printing to the EPL-N2000

After setting up the printer, you can use either lpr or ftp from any host to direct a print file to the EPL-N2000.

Note:
Because lpr may strip control characters, users may prefer to print using ftp.

The EPL-N2000 can handle many separate communications channels simultaneously. However, unless it is coupled with a compatible spooling unit, the EPL-N2000 does not have any disk-spooling capability. Print jobs received while the printer is processing a job are stacked and printed in rotation.

The EPL-N2000 responds to a print query by sending back status of the current print job and any stacked jobs. If it receives the query when all available connections are in use, it does not respond.

Note:
The status report may show gaps in the stack entries; for example, only jobs 2, 5, and 7 appear. The missing entries are print jobs sent by a different protocol, such as AppleTalk.

Using ftp to Print

As a default, ftp uses binary file transfer. If you want to include carriage returns at the end of lines, change to ASCII file transfer by entering ascii on the command line. To change back to binary file transfer, enter binary on the command line.

You can also append a form feed to the end of a print job by giving the destination file the name FEED or feed.

Follow these steps to print using ftp:

1. Type ftp, then open the EPL-N2000. The format is as follows:

   ftp open <host name>

2. Use the send command to send the print job. If you want to specify a particular output, enter any special commands or filters. The format for the send command is as follows:

   send <filename>

   The following example illustrates using ftp to send a file named “txtfile” in ASCII mode with a form feed appended.

   ```
   ftp open Allison
   ascii
   send txtfile feed
   ```

   Note:
   You can use scripts and ftp spool queues to automate the process of sending files to the EPL-N2000.

Using lpr to Print

Some versions of lpr strip out control characters and carriage return characters from a file before sending it, so lpr may be unsuitable for bit-image and font download files. You can use the -l filter on the lpr command line to try to avoid this problem.

You can also use the lpr filters listed in "Setting Up the EPL-N2000 as a Remote Printer" to specify a particular kind of output, such as an ASCII file with a carriage return at the end of each line.

You can use either of the following formats to print with lpr:

lpr -<host name> <filename>

or

lpr -d <host name>

The following example illustrates using lpr to send a file named "txtfile"with a form feed appended.

lpr -Plpaf txtfile

Setting Up the EPL-N2000 with Other UNIX Systems

This section contains information and scripts for setting up the EPL-N2000 with different types of UNIX.

Setting Up for SCO UNIX Systems

Some UNIX systems, such as SCO, do not support lpr. The two scripts on the following pages allow you to print from within some applications using ftp, which is supported on most systems using TCP/IP. Both scripts have been tested for SCO UNIX, but may require modification for other systems.

In SCO UNIX, the original printer model scripts are located in the following directory:

/usr/spool/lp/model

If you use the SCO administration program (SYSADMSH) to create a printer, these scripts are copied to the following directory:

/usr/spool/lp/admins/lp/interfaces

You can place a script directly into your interface directory, or you can enter the following:

/usr/lib/lpadmin-pPRINTER-v/dev/null-i/etc/
INTERFACESCRIPT

PRINTER is the printer name used in lpd printer, and INTERFACESCRIPT is the file name containing the next ftp script.

Script 1

The following script is a general interface program file:

```
NETPRINTER="basename $0"
copies=$4
shift;shift;shift;shift;shift;
files="$*"
i=1
while ($i -le $copies)
   do
   for files in $files
                    do
                    echo binary > /tmp/ftp.$$
                    echo put $file >> /tmp/ftp.$$
                    echo quit >> /tmp/ftp.$$
                    /usr/bin/ftp -n $NETPRINTER < /tmp/ftp.$$
                    /bin/rm /tmp/ftp.$$
                    done
   i='expr $i+ 1'
   done
exit 0"
*end of script*"
```

Script 2

The following script should have the same name as the host name for the EPL-N2000:

```
TEMPFILE=/tmp/ftpprint.$$
printer='epsonprt'
/usr/spool/lp/model/standard "$@" >$TEMPFILE
ftp -n $printer <<EOF
send $TEMPFILE
quit
EOF
rm $TEMPFILE
exit
```

Script 2 intercepts the print command and runs another printer interface script, in this case the printer "standard," then redirects the output to a temporary file. The script then opens an ftp session with the printer, sets binary mode, and sends the temporary file to the printer. Finally, the temporary file is removed.

Note:
The name of the model and interface directories used by your UNIX system may differ from those used by SCO.

Setting Up for IBM AIX Systems (RS/6000)

AIX implemements the lpr function, which is set up using the SMIT utility.

Follow these steps to set up the EPL-N2000 for IBM AIX systems:

1. Complete the steps in "Setting Up the EPL-N2000 as a Network Device" and "Setting Up the EPL-N2000 as a Remote Printer" earlier in this chapter.

2. Invoke SMIT as the superuser and go to the Add Remote Queue menu. To access the Add Remote Queue menu, select menus and submenus in the following order:

   Devices
   Printer/Plotter
   Manage Remote Printer Subsystem
   Client Services
   Remote Printer Queues
   Add Remote Queue

3. When you see a screen requesting information similar to the entries below, fill in the required data. For example:

Name of queue	EPSON
Queuing discipline	first come first serve
Activate the queue	yes
Destination host	200.200.200.99
Pathname short filter	
Pathname long filter	
Name of queue for remote printer	C82331_PRT

4. Check the entry for your queue under Remote Printer Queue devices. It will list the queue name and printer capabilities.

5. Use MANAGE LOCAL PRINTER SUBSYSTEM, AND LOCAL PRINTER QUEUES to start the queue.

The following example illustrates the /etc/qconfig file:

```
epson:
        device=epsonprn
        up=true
        host=200.200.200.99
        rq=C82331_PRT
epsonprn:
        backend=/usr/lp/rembak
```

6. If you want the EPL-N2000 to support lpr filters, include a line with the following format in the /etc/qconfig file:

   Remote Device=<printer option>

   For example, to support the lpaf filter, enter the following:

   Remote Device=lpaf

   Note:
   See "Setting Up the EPL-N2000 as a Remote Printer" earlier in this chapter for a list of printer options.

Setting Up for HP-UX Systems

You can use either ftp or rlp (lpr) to print from an HP-UX system. You use SAM to set up both. Before starting SAM, enter a unique IP address and host name in the /etc/hosts file. (See "Setting Up the EPL-N2000 as a Network Device" earlier in this chapter for information on assigning an IP address and host name.)

RLP Setup

On the printer definition page of SAM, use the following settings:

Printer Name:	Any name
Remote System Name:	Use name in /etc/hosts
Remote Printer Name:	Nothing or 'lpa', 'lpaf', etc, if using filters
Remote Council Model:	/bin/true
Remote Status Model:	/bin/true
Make System Default:	Enter as appropriate
Printer Class:	Nothing
Restrict Council:	Nothing
Remote Printer on BSD system:	Nothing

To print, use either rlp or the following:

```
lpd -d <host name>
```

Using FTP with HP-UX

Follow these steps to use ftp with HP-UX:

1. Type the following:

   ```
   lpshut
   lpadmin -p<spoolername> -m <modelscript> -v/dev/
   null
   accept <spoolername> enable <spoolername>
   lpsched
   ```

2. Create a model script:

   ```
   vi/usr/spool/lp/model/lan.model
   ```

3. Enter the following:

```
MODEL='basename $0'
REALMODEL='echo $0 /sed -e "s%$MODEL %model.lan/
$MODEL%"'

#This variable may be initialized when the script is
installed in the spooler.

PERIPH= if ("$PERIPH"="")
then
     PERIPH=$MODEL
fi
#Path for output of the original model
TMPPATH=/tmp/$MODEL.data

#Invoke original model and write to temporary file
$REALMODEL "$@"TMPPATH


#Log onto peripheral, switch to binary, and send the
temporary file

( echo user xx
echo binary
echo put $TMPPATH
echo bye
) ftp -i -n $PERIPH
ERRSTAT=$?
/bin/rm $TMPPATH
exit $ERRSTAT

*End of Script*
```

Chapter 6

Configuring the EPL-N2000 for OS/2

Protocol Support 6-2

Setting Up Redirection to the EPL-N2000 6-3
Obtaining Printer Status for Redirected Ports 6-5

Setting Up Piping to the EPL-N2000 6-5
Copying the Piping Software 6-6
Configuring Printers for Use with Remote Print Service 6-7
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Sharing an EPL-N2000 Among Several Workstations 6-10

This chapter explains how to use EPSON Net! for OS/2 to set up your Microsoft LANManager or IBM LANServer workstation to send print files to the EPL-N2000 through either redirection or piping. It also explains how to use piping to set up two or more OS/2 workstations to share an EPL-N2000 printer.

Before you begin, do the following:

- ❑ Make sure the EPL-N2000 is connected to the network and turned on. See Chapter 1 for information on connecting the Ethernet interface card.
- ❑ Make sure you have supervisor privileges for the OS/2 workstation on which you set up redirection or piping.

Protocol Support

The EPL-N2000 supports both NetBIOS over TCP/IP and NetBEUI. EPSON Net! for OS/2 provides the following programs for these protocols:

NETBEUI

RPRINT3, RSTAT3—LPT redirection
REMPRT3, REMBEU, REMDRV3, REMSTAT3—pipe support

TCP/IP

RPRINT, RSTAT—LPT redirection
REMPRT, REMDRV, REMSTAT—pipe support

Note:
OS/2 Warp Connect must be installed with TCP/IP, and OS/2 Warp and Warp Connect must be installed with NetBEUI.

Setting Up Redirection to the EPL-N2000

To redirect your workstation's ports to one or more EPL-N2000 printers, copy the EPL-N2000 redirection software to your root directory. Then edit STARTUP.CMD to include the RPRINT command.

Follow these steps:

1. If you're unsure of the serial number for the EPL-N2000, print a network adapter status sheet. See Chapter 1 for details.

2. Insert the diskette labeled EPSON Net! for NetWare DOS and OS/2 in your workstation's diskette drive.

3. Open an OS/2 full screen command session.

4. Open the OS/2 directory on drive A (or B) and go to the REDIRECT directory for your network protocol.

   - ❏ If your network protocol is TCP/IP, type CD TCPIP\REDIRECT and press the Enter key.

   - ❏ If your network protocol is NetBEUI, type CD NETBEUI\REDIRECT and press the Enter key.

5. Copy the redirection files appropriate to your protocol to the root directory of your OS/2 workstation.

   - ❏ If your protocol is TCP/IP, copy RPRINT.EXE and RSTAT.EXE.

   - ❏ If your protocol is NetBEUI, copy RPRINT3.EXE and RSTAT3.EXE.

6. Edit the STARTUP.CMD in your workstation's root directory to include the RPRINT command appropriate to your network protocol as the last line in the file.

- ❑ If your protocol is TCP/IP, enter the following command:

  RPRINT <serial number> </portname>

- ❑ If your protocol is NetBEUI, enter the following command:

  RPRINT3 <serial number> </portname>

Note:
Portname designates the port that will be redirecting to the remote printer. If no port is defined, the program assumes LPT1. For example, the command RPRINT 10900416 *causes print files directed to LPT1 to be received by an interface with the serial number 10900416.*

7. Repeat step 6 for each port that you want to redirect.

8. Reboot the workstation.

All printed output spooled to this workstation will be redirected to the EPL-N2000 printer(s) specified in the STARTUP.CMD entry.

Obtaining Printer Status for Redirected Ports

You can obtain printer status for each redirected port on your workstation by typing the RSTAT command appropriate to your network protocol at the OS/2 command line

- ❏ For TCP/IP, type RSTAT.
- ❏ For NetBEUI, type RSTAT3.

If several ports are redirected, RSTAT returns a message similar to the following:

```
ITC Remote Print Servers active for LPT1—Printer Busy
ITC Remote Print Servers active for LPT2—Printer Ready
ITC Remote Print Servers active for LPT3—Printer Ready
```

Setting Up Piping to the EPL-N2000

To set up piping to one or more EPL-N2000 printers, first create a remote print service directory (EPNET) on your workstation's root directory and copy the EPL-N2000 piping software to it. Then configure the new printers for use with remote print service, as follows:

- ❏ Define a port in the remote print service directory for each EPL-N2000 to which you want to pipe output.
- ❏ Create an initialization file that identifies each EPL-N2000 by portname and serial number, then add the initialization file to the STARTUP.CMD in your workstation's root directory.
- ❏ Use NET ADMIN to add the newly configured printers to the list of shared resources.

Copying the Piping Software

Follow these steps to create a remote print service directory and copy the EPL-N2000 piping software:

1. If you're unsure of the printer's serial number, print a network adapter status sheet. See Chapter 1 for details.

2. Insert the diskette labeled EPSON Net! for NetWare DOS and OS/2 in your workstation's diskette drive.

3. Open an OS/2 full screen command session.

4. To create a remote print service directory, type the following at the OS/2 command line:

   MD C:\EPNET

5. Open the OS/2 directory on drive A (or B) and go to the PIPES directory for your network protocol.

   - ❏ If your protocol is TCP/IP, type CD TCPIP\PIPE and press the Enter key.

   - ❏ If your protocol is NetBEUI, type CD NETBEUI\PIPE and press the Enter key.

6. Copy all files in the PIPES directory to the remote print service directory:

   - ❏ If your protocol is TCP/IP, type the following:

     COPY A:\TCPIP\PIPE*.* C:\EPNET

   - ❏ If your protocol is NetBEUI, type the following:

     COPY A:\NETBEUI\PIPE*.* C:\EPNET

7. Type the following to change to the remote print service directory:

   CD\EPNET

   Your remote print service directory should contain the files listed in the following table:

TCP/IP	NetBEUI	Description
ADDPORT.CMD	ADDPORT.CMD	Adds ports on the server
DELPORT.CMD	DELPORT.CMD	Removes ports from the server
PORTCHG.EXE	PORTCHG.EXE	Program used to add or remove ports
REMPRT.EXE	REMPRT3.EXE	Remote Print Service program
REMDRV.EXE	REMDRV3.EXE	Remote Print Service driver
REMSTAT.EXE	REMSTAT3,EXE	Printer status program

Configuring Printers for Use with Remote Print Service

After you finish copying the piping software, follow these steps to complete setup of remote print service:

1. From the remote print service directory, use the ADDPORT command to define a port for the first EPL-N2000. The format is as follows:

   ADDPORT <portname>

   Repeat this step for each EPL-N2000 to which you want to pipe output.

Note:
Choose port names that help identify the printers, such as PUBSPRT or EPLASER. You can use up to seven characters, but you can't use any of the following:

/ \ . [ ] : ; | > < + = ? * $ “

2. If necessary, install the printers and create queues attached to your OS/2 workstation. See your OS/2 documentation for information.

   Note:
   If you plan to use a shared OS/2 print queue that receives print jobs from other workstations, install either the IBMNULL or MSNULL printer driver. For the device to connect to, choose one of the port names entered in step 2.

3. Create an initialization file in the remote print service directory.

   - ❏ If your network protocol is TCP/IP, the format of the file is as follows:

     REMPRT <serial number> <portname>
     <serial number> <portname> <serial number>
     <portname>

   - ❏ If your network protocol is NetBEUI, the format is as follows:

     REMPRT3 <serial number> <portname>
     <serial number> <portname> <serial number>
     <portname>

   Each EPL-N2000 printer to which you pipe output is identified in this file by its serial number and the portname defined in step 1.

Note:
The remote print service uses this file at startup to assign printer names to the device port names. For example, the following assigns a printer whose serial number is 10900701 to the EPLASER port:

```
REMPRT  100900701 EPLASER
```

4. To ensure that the remote print service is initialized each time you start your workstation, edit the STARTUP.CMD in your root directory to include the initialization file as the last line.

   - ❏ If your network protocol is TCP/IP, type the following:

     ```
     \EPNET\REMPRT @ REMPRT.INI
     ```

   - ❏ If your network protocol is NetBEUI, type the following:

     ```
     \EPNET\REMPRT3 @ REMPRT3.INI
     ```

   Note:
   If you want to start the remote print service manually, you can execute the REMPRT command from the OS/2 command prompt.

5. Use the LAN Server Administration facility (NET ADMIN) to add newly configured printers to the list of shared resources. See your OS/2 documentation for more information.

Obtaining Printer Status for Piped Ports

You can obtain printer status for each piped port on your workstation by typing the REMSTAT command appropriate to your network protocol at the OS/2 command prompt.

- ❏ For TCP/IP, type REMSTAT.
- ❏ For NetBEUI, type REMSTAT3.

If several ports are redirected, REMSTAT returns a message similar to the following:

```
ITC Remote Print Servers active for PUBSPRT—Printer Busy
ITC Remote Print Servers active for EPLASER—Printer Ready
```

Sharing an EPL-N2000 Among Several Workstations

To set up two or more IBM LANServer workstations running Warp Connect to share an EPL-N2000, you use piping to configure a unique port name for each workstation instead of each printer.

Follow these steps:

1. Complete the steps in "Copying the Piping Software."

2. From your workstation's remote print service directory, use the ADDPORT command to configure a port for the first workstation.

   Note:
   Choose a name that you can use to begin a sequence.. For example, the entry you make for the first workstation might be the following:

   ```
   ADDPORT PORTA
   ```

3. Repeat step 2 for any additional workstations.

4. Create an initialization file in the remote print service directory.

   - ❏ If your network protocol is TCP/IP, the format of the file is as follows:

     ```
     REMPRT  <serial number> <portname>
     <serial number><portname>
     <serial number><portname>
     ```

   - ❏ If your network protocol is NetBEUI, the format is as follows:

     ```
     REMPRT3   <serial number>
     <portname><serial number><portname>
     <serial number><portname>
     ```

   Note:
   The remote print service uses this file at startup to assign the printer to the workstations' portnames. The file identifies the shared EPL-N2000 printer by the serial number of its Ethernet card, and each workstation by the portnames assigned in steps 2 and 3. For example, if the printer's Ethernet card has the serial number 10900416, and the printer is shared by three workstations, the initialization file might contain the following:

   ```
   REMPRT  100900416 PORTA PORTB PORTC
   ```

5. Edit STARTUP.CMD in your workstation's root directory to include the REMPRT command and the initialization file as the last line.

   - ❏ If your network protocol is TCP/IP, type the following:

     ```
     \EPNET\REMPRT @ REMPRT.INI
     ```

   - ❏ If your network protocol is NetBEUI, type the following:

     ```
     \EPNET\REMPRT @ REMPRT3.INI
     ```

Note:
This line ensures that the remote print service is initialized each time you start the workstation.

6. If necessary, use the LAN Server Administration facility (NET ADMIN) to add the newly configured printer to the list of shared resources. See your OS/2 documentation for more information.

Chapter 7

Using the EPSON Status Monitor

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- Checking Printer Status 7-4
- Changing Printer Settings 7-5
- Changing Serial Settings 7-7
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7

The EPSON Status Monitor utility gives the network administrator an additional tool to display printer status and change printer settings from the network. You can use the Status Monitor on a Windows 95 or Windows NT 3.51 system. The Status Monitor requires the following:

- ❏ If you're using Windows NT 3.51, you must install AppleTalk. (If you're using Windows 95, the EPSON Status Monitor utility automatically installs AppleTalk.)
- ❏ If you are using Windows 95, make sure that Microsoft DLC is not installed and that the ODI driver is not selected as the network card driver.

Installing the Status Monitor Utility

Follow these steps to install the Status Monitor utility:

1. Insert the EPSON Status Monitor diskette.
2. If you are using Windows 95, click Start, then choose Run. If you are using Windows NT 3.51, go to the Program Manager, then choose Run from the File menu.
3. Type a:setup (or b:setup); then click OK. The utility begins to install automatically. When installation is complete, you see a message asking you to restart Windows.
4. Click OK. Your system restarts.

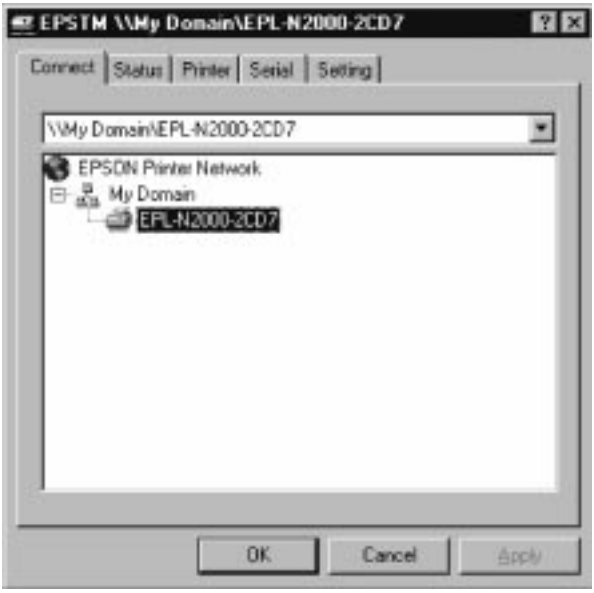
Accessing the Status Monitor Utility

Follow these steps to access the Status Monitor Utility:

From Windows 95

1. Click Start, then point to Programs.

2. Select EPSON Status Monitor. The Status Monitor Connect menu appears.



From Windows NT 3.51

1. From the Program Manager, double-click the EPSON Status Monitor folder.

2. Double-click the Status Monitor icon inside the folder. The Status Monitor Connect menu appears.

Using the Status Monitor Utility

Once you select a printer in the Connect menu, you can use the Status Monitor to check the printer's status, to change basic printer and serial settings, and to save settings in a configuration file or load a configuration file that has already been saved to the printer.

Checking Printer Status

Use the Status menu to check whether the selected printer is busy, idle, or in standby mode, as well as to check the paper source, paper size, the amount of paper left in each paper tray, the amount of toner remaining, and the amount of printer RAM. The Status menu is read-only.

Changing Printer Settings

Use the Printer menu to change such basic printer settings as print density, print offset margins, and the interval of time between jobs before the printer goes into power-saving mode.

When you finish changing settings, click the OK button at the bottom of your screen to save them.

Print Menu Settings

Settings	Options	Description
Density	1 to 5	Sets the print density to make your printout darker or lighter, as necessary.
Job Time Out	0 to 300 seconds	Period of time between jobs before the printer goes into power-saving mode.

Print Menu Settings (continued)

Settings	Options	Description
Panel Language	**English**, French, German, Italian, Spanish, Swedish, Danish, Dutch, Finnish, Portuguese	Language used on printer control panel.
Page Protect	**Auto** On	Sets the printer to use Page Protect mode for printing complex, memory-intensive documents. It's best to use the default setting (Auto) because Page Protect reallocates printer memory from receiving data to printing it, making complex jobs take longer to print.
Auto Continue	On **Off**	Sets the printer to use Auto Continue mode to continue printing 5 seconds after recovering from a print overrun or insufficient memory error. It's best to leave Auto Continue OFF so you are alerted to errors; if you'll be away from the printer and are aware of possible errors, you can turn on Auto Continue mode.
Power Down	**On** Off	Sets the printer to power down automatically after the interval between jobs specified in Job Time Out.
Image Optimum	**Auto** On Off	Sets the printer to use Image Optimum mode so you can print complex, memory-intensive graphics. It is best to use the default setting (Auto) because Image Optimum mode reduces graphic quality when the amount of data reaches the memory limit.
Paper Size Error	**Warning** Ignore	Sets the printer to give a warning or ignore a paper size error. If it ignores a paper size error, the image may be printed outside the edge of the paper and cause smudging.
Offset	Top: -9 to 99 mm (**0**) Bottom: -9 to 150 mm (**0**)	Makes fine adjustments (in 0.5 mm increments) to the vertical and horizontal printing positions on the page.

Changing Serial Settings

Use the Serial menu to change serial settings, such as parity and baud rate.

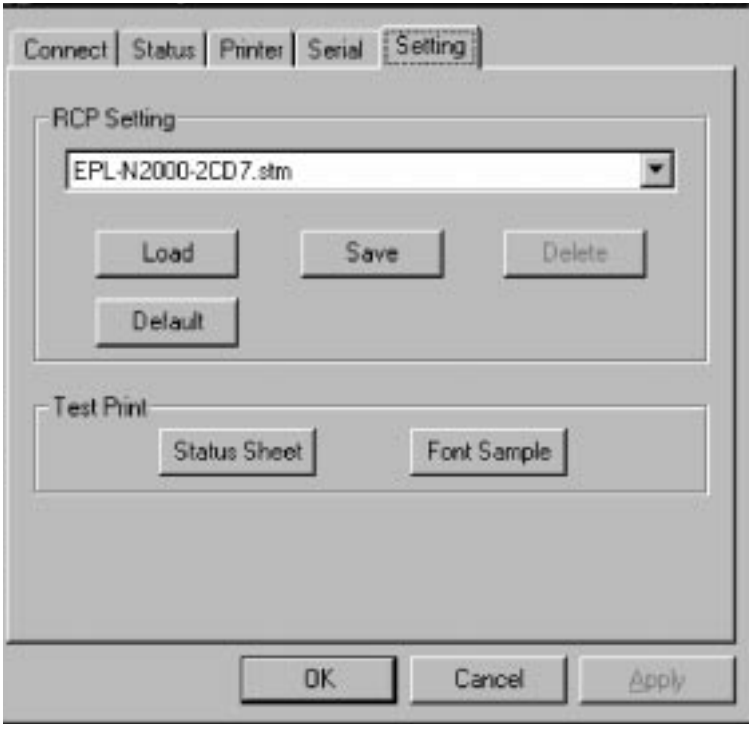
When you finish changing settings, click OK at the bottom of the screen to save your settings and return to the Connect menu.

Serial Menu Settings

Settings	Options	Description
Baud Rate	300 600 1200 2400 4800 **9600** 19200 38400	Sets the data transfer rate (baud) for the serial interface. The baud rate is measured in bits per second (bps). See your computer manual and software documentation for the correct settings.
Word Length	7 **8**	Selects an 8-bit or 7-bit word length. See your computer manual and software documentation for the correct setting.
Stop Bit	1 **2**	Sets the number of stop bits on each character of information sent to the printer. Stop bits signal the end of a character.
DTR	**On** Off	Turns the printer's ready communications protocol ON or OFF. You can use DTR (Data Terminal Ready) in combination with the XON/XOFF option setting.
Parity	**On** Off	Enables or disables parity checking. The parity bit, if used, provides a basic form of error detection. See your computer manual and software documentation for the correct setting.
Xon/Xoff	**On** Off Robust	Turns the Xon/Xoff communications protocol on or off. You can use this setting in combination with the DTR option setting.

Working with Printer Configuration Files

In addition to printing a status sheet or font sample, you can use the Setting menu to save printer settings in a configuration file, load a previously saved configuration file, or delete a configuration file.



Use the Load, Save, and Delete buttons to open additional dialog boxes for performing these tasks. (You usually save files as EPSON Printer Setting Files, with the extension .stm.) The Default button loads the printer's default settings.

When you finish with the Setting menu, click OK to return to the Connect menu.

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